



THE EDI  
SERVICES  
AND SOFTWARE  
MARKETS

Victor S. Wheatman  
Manager - EDI Planning Services

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INPUT

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## INPUT EDI Planning Service (EDIPS)

- EDI Newsletter
- Market Studies
- Custom Research
- Conferences, Seminars

INPUT

NOTES:

ETOK-1



## EDIPS Study Topics

- North American Network Services
- European Market
- U.S. Government EDI
- EDI Software

INPUT

NOTES:

ETOK-2





## EDIPS Study Topics

- Vertical Market Potentials
- EDI and Professional Services
- International EDI
- Case Studies

INPUT

NOTES:

ETOK-3



## EDIPS

The Only Full-Service  
EDI Research Program

INPUT

NOTES:

ETOK-4



## VAN (U.S.)

- Communications Related  
"Value Added":
  - Protocol, Speed Conversions
  - Buffering, Store & Forward
- A Link to Applications, Services,  
Data Bases, Other Companies

INPUT

NOTES:

ETOK-5



## Remote Computer Service (Service Bureau)

- Data Entry, Processing
- May Use Tapes, Diskettes
- VANs Communicate to RCS

INPUT

NOTES:

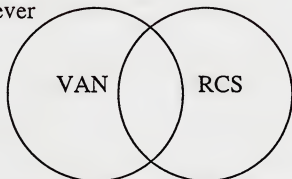
ETOK-6





## VAN & RCS

However



The Difference is the Network

INPUT

NOTES:

ETOK-7



# ELECTRONIC DATA INTERCHANGE

The Computer-to Computer Exchange of  
Intercompany Business Documents  
and Information

- Overcomes Incompatibilities
- Standard Formats

INPUT

NOTES:

ETOK-8

INPUT



## EDI TRANSMITS ELECTRONIC BUSINESS DOCUMENTS

- Machine Readable
- PO's, Invoices, etc.
- Also Health Care Claims, Others
- Not ATM, POS, or E-Mail

INPUT

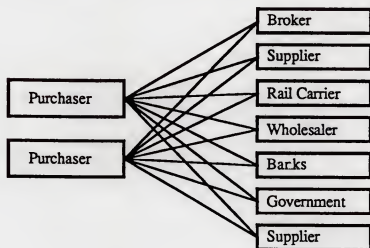
NOTES:

ETOK-9

INPUT



## EDI LINKS CAN GET COMPLICATED



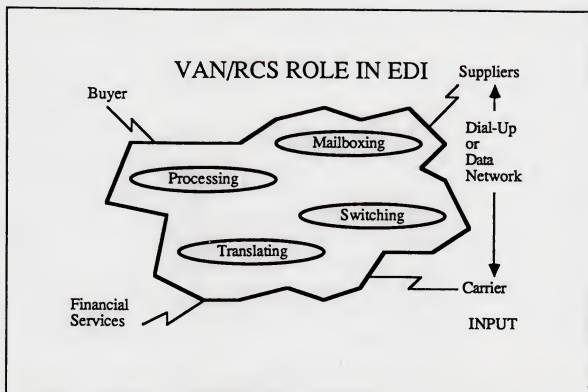
INPUT

NOTES:

ETOK-10







NOTES:

ETOK-11

**INPUT**



## VARIETIES OF EDI

Mainline EDI	- Purchasing
LDI	- Logistics
EMCS	- Medical Claims
Interface	- Insurance
EFT with Addendum	- Value and Data

INPUT

NOTES:



## **EDI BENEFITS**

<b>Reduced Expenses</b>
<b>Fewer Errors</b>
<b>Improved Turnaround</b>
<b>Better Customer Service</b>
<b>Enhanced Management Control</b>

# THE JOURNAL OF THE ROYAL ANTHROPOLOGICAL INSTITUTE

Vol. 100, Part 1, 1970

1. The evolution of the human brain  
2. The evolution of the human hand  
3. The evolution of the human foot  
4. The evolution of the human jaw  
5. The evolution of the human ear  
6. The evolution of the human eye  
7. The evolution of the human nose  
8. The evolution of the human mouth  
9. The evolution of the human throat  
10. The evolution of the human larynx  
11. The evolution of the human trachea  
12. The evolution of the human bronchi  
13. The evolution of the human lungs  
14. The evolution of the human heart  
15. The evolution of the human stomach  
16. The evolution of the human intestines  
17. The evolution of the human liver  
18. The evolution of the human pancreas  
19. The evolution of the human spleen  
20. The evolution of the human kidneys  
21. The evolution of the human bladder  
22. The evolution of the human uterus  
23. The evolution of the human vagina  
24. The evolution of the human penis  
25. The evolution of the human testis

Published by the Royal Anthropological Institute, 21, BEDFORD SQUARE, LONDON, W.C.1

# MAJOR EDI SERVICES



U.S.A.

**INFORMATION  
SERVICES**

**the EDI\*Express**

**McDonnell Douglas  
Electronic Data Interchange  
Systems Company**

**edi.net**



**STERLING  
SOFTWARE**

**Ordernet**

**IBM**

**Information Exchange**



**CONTROL DATA**

**REDINET**

ETOK-14

**INPUT**





## MAJOR VAN EDI SERVICES

VANS	SERVICE	PRINCIPAL USERS
McDonnell Douglas	EDI*Net	Cross-Industry
GEISCO	EDI*Express	Cross Industry: Transportation, Grocery, Retailers, Automotive, Health Care Insurance
Control Data	RediNet	Cross-Industry
IBM- Information Network	Information Exchange	Insurance (IVANS), Electronics, Chemicals, Textiles, Manufacturers

INPUT

NOTES:



## GEIS

- Aggressive
- Worldwide Alliances, Agents
- EDI/EMC/PETROEX
- Design✕Express

INPUT

NOTES:

ETOK-16



## IBM

- Information Network—SNA
- Intercontinental Services
- Internal Use
- Insurance, Health Care,  
Electronics, Retail, Etc.

INPUT

NOTES:

ETOK-17



## AT&T

- ~~Net 1000~~
- AT&T Mail—X.400 EDI
- CDC—RediAccess
- Turnkey Systems—RIVET

INPUT

NOTES:

ETOK-18





## MAJOR RCS EDI SERVICES

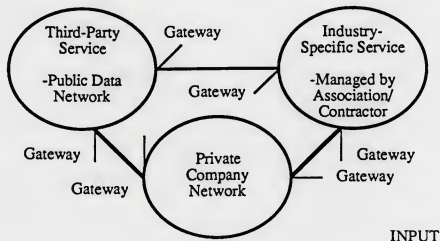
RCS FIRMS		
Sterling Software	Ordernet	Cross-Industry Grocery, Pharmaceuticals, Medical/Surgical Supplies, Hardware
Kleinschmidt		Rail Transportation
RailInc		Rail Transportation
TranSettlements		Motor Transportation

INPUT

NOTES:



### THREE TYPES OF EDI NETWORKS



NOTES:



## PRIVATE EDI NETWORKS

ROCKWELL	AUTO MAKERS
CATERPILLAR	HEWLETT-PACKARD
SEARS/PENNEYS	AMERICAN HOSPITAL SUPPLY
GENERAL FOODS	LEVI-STRAUS
MOTOROLA	OTHERS

INPUT

NOTES:

ETOK-21



## PRIVATE NETWORK TRENDS

- Private Nets Larger than Public (1985-1986)
- Few, if Any More Private EDI Nets
- Conversions to Public/Open Nets?

ETOK-22

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THE UNIVERSITY OF CHICAGO

DEPARTMENT OF CHEMISTRY

PHYSICAL CHEMISTRY

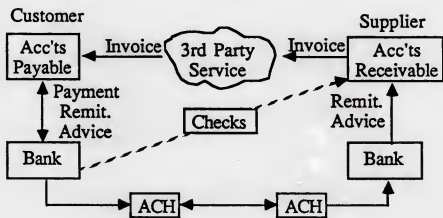
LECTURE NOTES

BY

PROFESSOR



## Banks in EDI



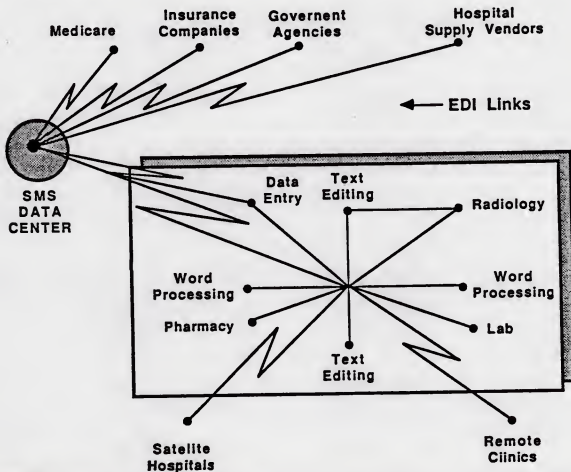
INPUT

NOTES:

ETOK-23



## SHARED MEDICAL EXTENDED NETWORK



ETOK-24

1. The first part of the paper is devoted to a discussion of the

main results of the paper, which are summarized in the

following table. The results are obtained under the

assumption that the system is stable and the

control law is chosen as follows:

where  $K$  is a constant matrix and  $\lambda$  is a scalar

parameter. The results are summarized in the

following table. The results are obtained under the

assumption that the system is stable and the

control law is chosen as follows:

where  $K$  is a constant matrix and  $\lambda$  is a scalar

parameter. The results are summarized in the

## EDI SOFTWARE FUNCTIONS

Table Driven Translation - Hard Coded

Transaction Sets - Electronic Document Formats

Document Processor - Editor and Output

Optional Communications Module

INPUT

NOTES:

ETOK-25

INPUT



## SOFTWARE VENDOR CATEGORIES

CATEGORY	COMMENTS
Start-Ups	Entrepreneurial, Some Spin-Offs of Consulting Firms
VAN/RCS	Goal is to Increase Network Traffic
Established Application Vendors	Adding EDI Functions to Existing Software

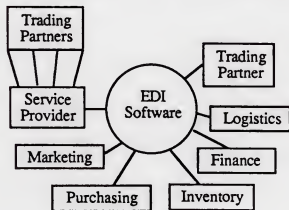
INPUT

NOTES:

CONTENTS	
ORIGINAL ARTICLES	1
REPORTS	1
SYMPOSIUM	1
EDITORIAL	1
DEPARTMENTS	1
BOOK REVIEW	1
NOTES	1
ANNOUNCEMENTS	1
ADVERTISEMENTS	1



## EDI SOFTWARE IS THE CORE OF THE SYSTEM



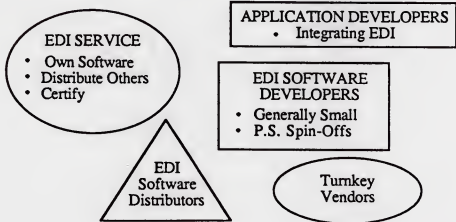
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NOTES:

ETOK-27



## THE EDI SOFTWARE MARKET IS FRAGMENTED



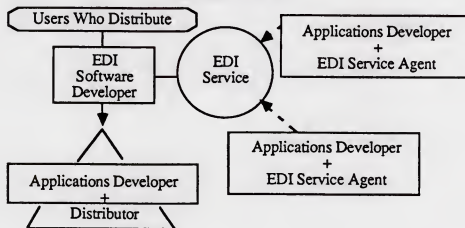
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NOTES:

ETOK-28



## PARTICIPANTS ARE FORMING ALLIANCES



INPUT

NOTES:

ETOK-29



## EDI SOFTWARE MARKET CONCLUSIONS

- A Fragmented Market
- Major Vendors Missing
- Alliance Formation - Experimental Relationships
- Missionary Selling Needed
- Integrated Solutions - The Wave of the Future

INPUT

NOTES:

ETOK-30





## SURVEY FINDINGS

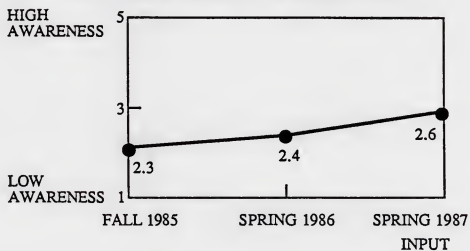
NOTES:

ETOK-31

INPUT



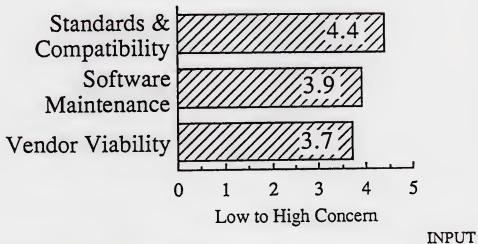
## EDI AWARENESS IS GROWING



NOTES:



## EDI User Issues and Concerns

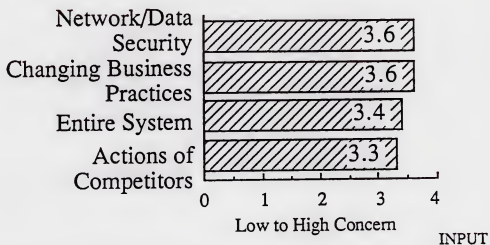


NOTES:

ETOK-33



## EDI User Issues and Concerns



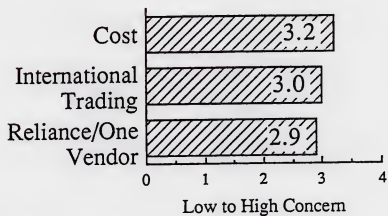
NOTES:

ETOK-34





## EDI User Issues and Concerns



INPUT

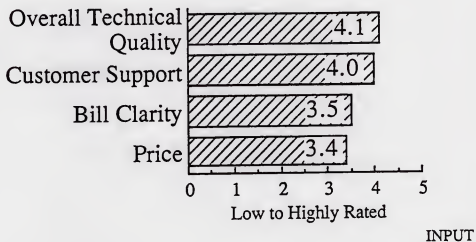
NOTES:

ETOK-35



## User Ratings Third-Party Networks

Averages—All Networks

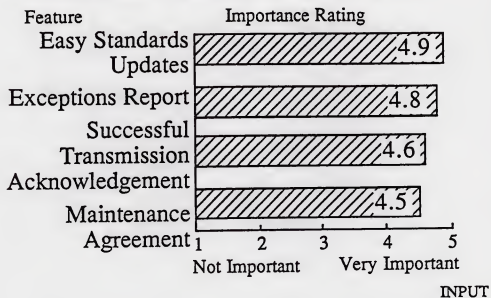


NOTES:

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## Software Features Importance

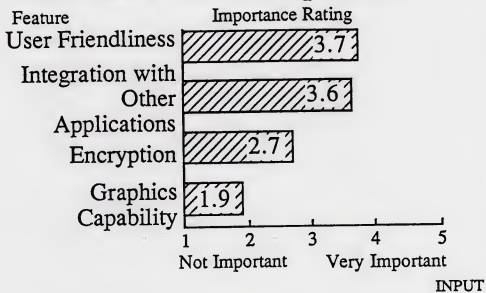


NOTES:

ETOK-37



## Software Features Importance



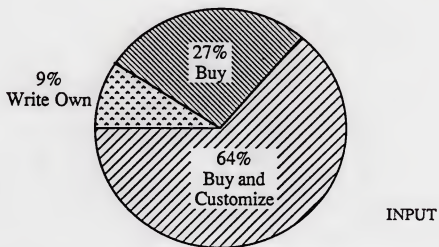
NOTES:

ETOK-38





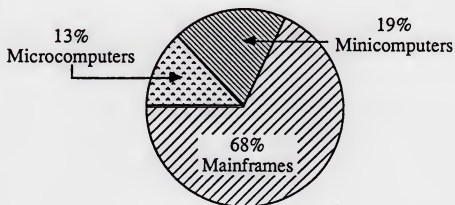
## Build Or Buy EDI Software User Responses



ETOK-39



## Computers Planned Or Used For EDI User Responses



INPUT



## More Micros Will Be Used For EDI Than Suggested

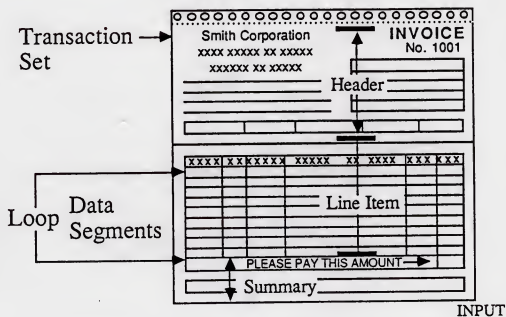
- Functional Departments will Interface PCs to Mainframes
- PC Implementation - Easiest, Less Expensive
- Small Companies Do Not Have Larger Processors

INPUT

ETOK-41



# X12 Terminology



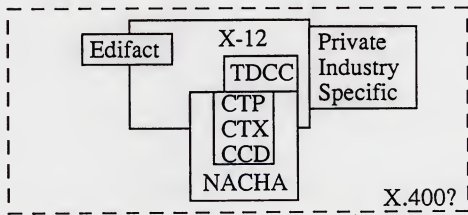
NOTES:

ETOK-42





## EDI Standards Relationships



INPUT

NOTES:

ETOK-43



## Standards Interfusion

X12—► Edifact 400

Pro: Edifact—"The True Faith"

Con: X.400 Cycle Is 4 Years  
Varieties of X.400?

When: 2-10 Years

INPUT

NOTES:

ETOK-44



## Standards Interfusion

UCS  $\longleftrightarrow$  X12

Pro: Companies Now Using Both

Con: "Ain't Broke—Why Fix It?"

When: 2-5 Years

INPUT

NOTES:

ETOK-45



## Standards Interfusion

TDCC ↔ X12

Pro: Would Solve Coordination  
Problems

Con: Work Load Issues

When: 4-10 Years

INPUT

NOTES:

ETOK-46





## Standards Interfusion

Proprietary —————→ X12  
Industry Specific

Pro: "Go with the Flow"

Con: Ease of Change

When: Now

INPUT

NOTES:

ETOK-47



## Standards Interfusion

X12  $\longleftrightarrow$  Insurance  
(IIR/Acord)

Pro: Useful in Mortgage Banking,  
Transportation, Others?

Con: Coordination Issues

When: 2 Years (Real Estate)

INPUT

NOTES:

ETOK-48



# EDI CASE STUDY

## LEVI-STRAUSS

INPUT

ETOK-49



## Levi-Strauss

- 17,000 Retailers—200,000 Stores
- Retail Electronic Services—  
a Marketing Group
- Also Responsible for Supplier EDI

INPUT

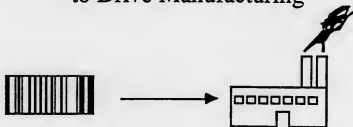
ETOK-50





Levi-Strauss

Key Concept:  
Capture POS Data  
to Drive Manufacturing



INPUT

ETOK- 51



Levi-Strauss

### Retail Services:

- Sell Through Analysis and Reporting System (STARS)
- Model Stock Management
- Retailer EDI (REDI)
- Purchase Order Reconciliation

INPUT

ETOK-52



Levi-Strauss

## Benefits:

- Improved Turns
- Fewer Stock Outs
- Enhanced Retailer Relations

INPUT

ETOK-53



EDI CASE STUDY

FIRST NATIONAL  
BANK OF CHICAGO

INPUT

ETOK-54





First Chicago

## President's Mandate:

"We Will Do EDI"

- Purchasing
- Potential Service

INPUT

ETOK-55



First Chicago

1985: No Supplier Was Ready

So: Loaned Software  
Underwrote Costs  
Free Training & Installation

INPUT

ETOK-56



First Chicago

## Cost Benefit Analysis (1985):

Would Cost More—Not Less

- Dual Systems
- But Costs have Moderated

INPUT

ETOK-57



First Chicago

## Implementation

- 65 Staff on Project
- "Bilingual" Users' Guide
- 25-Point Software and Network Evaluation

INPUT

ETOK-58





First Chicago  
Transactions

	<u>Electronic</u>	<u>Paper</u>
1986	1,200	1 million
1987	4,800	
1988	20,000	50,000

INPUT

ETOK-59



First Chicago

## Benefits

- \$2.5 Million in Annual Savings
- Enhanced Control/Monitoring—  
"Everything By Registered Mail"
- Experience Applied to EDI Services

INPUT

ETOK-60



# EDI CASE STUDY

## HEWLETT PACKARD

INPUT

ETOK-61



H-P

- 56 Plants in 15 Countries
- Decentralized → Integrated
- Entrepreneurial/Complex

INPUT

ETOK-62





H-P

## EDI Approach

Steering Committee	-Policies
EDI Central	-Technical
Business Units	-Unit Interfaces
	-Implementation
	Partner Relations

INPUT

ETOK-63



H-P

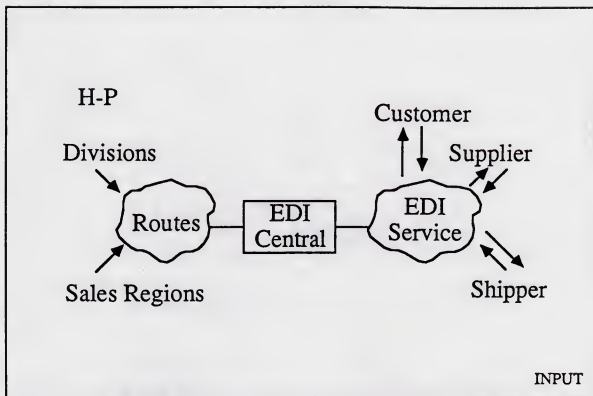
## EDI Goals

- Industry Leader
- Improve Customer Satisfaction
- "One Company" Image
- Eliminate Duplication

INPUT

ETOK-64





ETOK-65



H-P

## Recommendations

- Centralize Approach through Steering Committee
- Participate in Standards Groups
- Watch Secondary and Third-Order Issues
- "Spread the Gospel"

INPUT

ETOK-66





## Texas Instruments

- Centralized Worldwide
- T I's Own Network
- Provides "Free" Consulting
- Evaluating Graphics and Catalogs

INPUT

NOTES:

ETOK-67 3

## REFERENCES

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- Adams, J. S. (1967). Toward an equity theory of organizational behavior. *Organizational Behavior and Human Decision Processes*, 3, 63-91.
- Adams, J. S. (1971). *Equity theory: A comparison of the equity theory of social exchange with the equity theory of social exchange*. In J. S. Adams (Ed.), *Equity theory: A comparison of the equity theory of social exchange with the equity theory of social exchange* (pp. 1-29). New York: Academic Press.
- Adams, J. S. (1975). *Equity theory: A comparison of the equity theory of social exchange with the equity theory of social exchange*. In J. S. Adams (Ed.), *Equity theory: A comparison of the equity theory of social exchange with the equity theory of social exchange* (pp. 1-29). New York: Academic Press.
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- Adams, J. S. (1995). *Equity theory: A comparison of the equity theory of social exchange with the equity theory of social exchange*. In J. S. Adams (Ed.), *Equity theory: A comparison of the equity theory of social exchange with the equity theory of social exchange* (pp. 1-29). New York: Academic Press.
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- Adams, J. S. (2010). *Equity theory: A comparison of the equity theory of social exchange with the equity theory of social exchange*. In J. S. Adams (Ed.), *Equity theory: A comparison of the equity theory of social exchange with the equity theory of social exchange* (pp. 1-29). New York: Academic Press.
- Adams, J. S. (2015). *Equity theory: A comparison of the equity theory of social exchange with the equity theory of social exchange*. In J. S. Adams (Ed.), *Equity theory: A comparison of the equity theory of social exchange with the equity theory of social exchange* (pp. 1-29). New York: Academic Press.
- Adams, J. S. (2020). *Equity theory: A comparison of the equity theory of social exchange with the equity theory of social exchange*. In J. S. Adams (Ed.), *Equity theory: A comparison of the equity theory of social exchange with the equity theory of social exchange* (pp. 1-29). New York: Academic Press.

## WESCO

- Survey Customer Inventory Levels  
→ Automatic Replacement Orders
- Access Through Any Branch—  
Redistributes
- VAN or Direct

INPUT

NOTES:

ETOK-68



## IBM

- 1991 Goal—2,000 EDI Suppliers
- Save \$60 Million Annually

## DEC

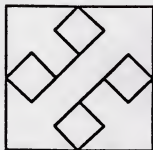
- EDI Executive Committee
- Electronic Store

INPUT

NOTES:

ETOK-69





EDI/  
APPLICATION  
INTEGRATION

INPUT

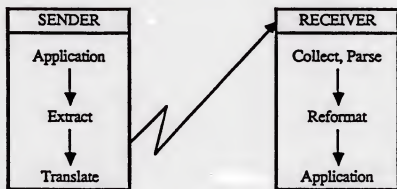
NOTES:

ETOK-70





## EDI/APPLICATION INTEGRATION



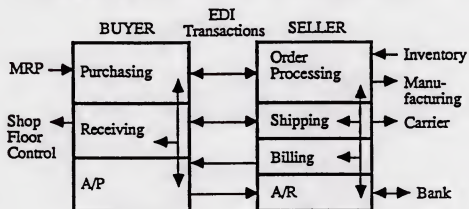
INPUT

NOTES:

ETOK-71



## EDI/APPLICATION INTEGRATION



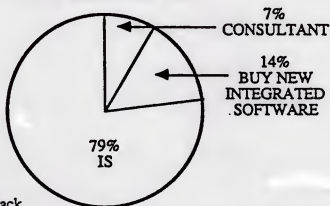
INPUT

NOTES:

ETOK-72



## EDI INTEGRATION METHOD USER RESPONSES



Comment: Reflects a Lack  
of Integrated Solutions

INPUT



## EDI/APPLICATION INTEGRATION

- Effects many departments
- Top management needs to set corporate goals
- Task force approach required

INPUT

NOTES:

ETOK-74





## EDI/APPLICATION INTEGRATION

(Continued)

- P.S. Firms Can Assist
- EDI a Starting Point for Total Operational Improvements

INPUT

NOTES:

ETOK 75



## **EDI AS PART OF CSI PROJECTS**

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- ⊙ **Multiple interfaces**
- ⊙ **Multi-vendor environments**
- ⊙ **Organizational/Management issues**
- ⊙ **Strategic importance**

**INPUT**

**Notes:**



**EDI AS PART OF CSI PROJECTS**  
**MULTIPLE INTERFACES**

- ⊕ **Integrating existing systems/software**
  - Marketing, purchasing, inventory, manufacturing  
finance, logistics
- ⊕ **Networks**
  - LANs
  - Corporate WANs
  - Private nets
  - Public nets

INPUT

**Notes:**



**EDI AS PART OF CSI PROJECTS**  
**ORGANIZATIONAL/MANAGEMENT ISSUES**

---

- ⊕ **Development transcends individual department responsibilities**
- ⊕ **New ways of doing business**
  - **Impact on organizational structure/methodology**
- ⊕ **Internal and external marketing**
- ⊕ **Training, documentation**

**INPUT**

**Notes:**





**EDI AS PART OF CSI PROJECTS**  
**STRATEGIC IMPORTANCE**

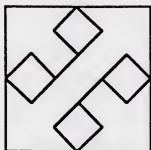
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- ⊕ **Speed**
- ⊕ **Competitiveness**
- ⊕ **Reduce risk "end to end"**

INPUT

**Notes:**





ENHANCED  
EDI SERVICES/  
SYSTEMS

INPUT

NOTES:

ETOK-80



## EDI SERVICE COMPONENTS/PROFITABILITY

- COMMUNICATIONS - LOW
- PROCESSING - MEDIUM
- "VALUE ADDED" - HIGH
  - REPORTS
  - DATA BASE
  - GRAPHICS
  - ETC.

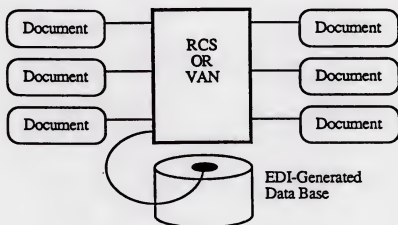
INPUT

NOTES:

ETOK-81



## EDI TRAFFIC BECOMES A DATA BASE



INPUT

NOTES:

ETOK-82

INPUT





## EDI TRAFFIC BECOMES A DATA BASE

Only Example: SSW's Medimetrik

-Aggregate Pharmaceutical Information

Others Can Benefit

Applications:

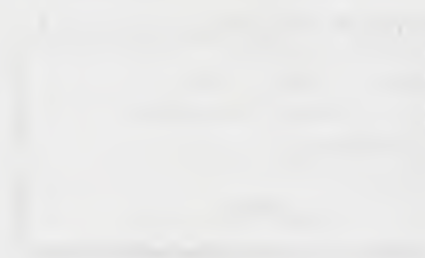
-Market Research

-Sales/Distribution Analysis

INPUT

NOTES:

ETOK-83



## EDI DATA BASE ISSUES

- Trading Partner Participation
- Who Can Access
- Security/Privacy
- Software Design

INPUT

NOTES:

ETOK-84



## DATA BASES CAN FACILITATE TRADING

### Example: Schweber Net

- Exclusive Use of Video Log
  - Electronic Components
  - NAPLPS Graphics
- On-Line Order Entry
  - Ordering System → Pick List
- Competitive Advantage

INPUT

NOTES:

ETOK-85



## GRAPHICS/EDI INTEGRATION

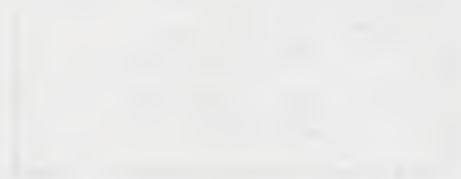
Examples: - Schweber Net  
- Design \* Express (Geis)  
- WSSDOM (AT & T/CAD CAM Inc.)

Premise: Graphics needed in buying decisions-  
aerospace, electronics, speciality  
manufacturing, others

INPUT

NOTES:

ETOK-86





## GRAPHICS/EDI INTEGRATION

### WSSDOM

Wide Scale Shared Data Operations Management  
IGES CAD/CAM GRAPHICS + TEXT

- Supplier link
- Maintenance link

INPUT

NOTES:

ETOK-87



## WSSDOM - SUPPLIER LINK

- Bid opportunities for small-medium size speciality parts/components manufacturers
- Listing fees-usage fees
- Mailboxes receive bid/bid opportunities  
-Flexible formats

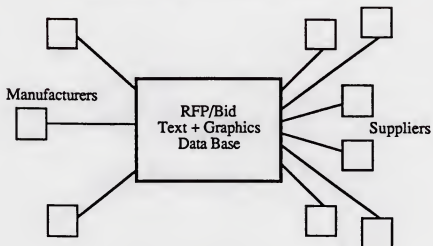
INPUT

NOTES:

ETOK-88



## WSSDOM-SUPPLIER LINK



INPUT

NOTES:

ETOK-89



## EDI/E-MAIL INTEGRATION

- GEIS EDI \* EXPRESS —→ QUIK-COMM
- ORDER NET —→ EDI/Laser mail (Hard Copy Conversion)
- ORDER NET —→ FAX

Opportunity: E-MAIL FORMS/SCRIPTS —→ EDI

INPUT

NOTES:

ETOK-90







# EDI INTER- NETWORKING

("INTERWORKING")

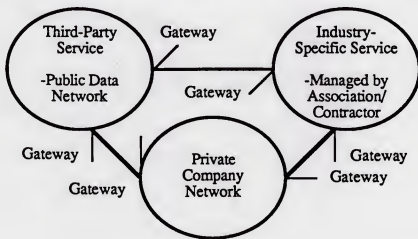
INPUT

NOTES:

ETOK-91



### THREE TYPES OF EDI NETWORKS



INPUT

NOTES:

ETOK-92

INPUT



## EDI INTERNETWORKING

### REASONS

- Trading Partners On Other Services/Networks
- Cross-Industry Trading
  - Cross-Industry Translations
- "Universal" Data Services
- Goal: Transparency

INPUT

NOTES:

ETOK-93



## EDI INTERWORKING EXAMPLES

GEIS' EDI \* Express → Others (On Request)  
SSW's Ordernet ↔ MDC's EDI \* Net (Grocery)  
RaiLinc ↔ TranSettlements, Kleinschmidt  
CDC's RediNet ↔ Private Networks  
(RediAgent)

INPUT

NOTES:

ETOK-94





## INTERWORKING: THE FUTURE X.400

- E-mail (Messaging) Connectivity
- EDI Documents Within X.400 Envelopes
- International Implications
- Mixed Media (Voice, Video, Graphics, Data)

INPUT

NOTES:

ETOK-95



## EDI INTEGRATION "The Wave of the Future"

- Applications
- Enhanced Services: E-mail, E-forms, Data Bases
- Interworking
- Media (Data, Graphics, Voice, Video)

INPUT

NOTES:

ETOK-96



## EDI In Discrete Manufacturing

Segment	Activity Summary
Auto	EDI Essential to Reduce Costs; "Big 3" Private Nets moving to Public Standards
Electronics	EDX Conforms to X12

INPUT

ETOK-97



## EDI In Discrete Manufacturing

Segment	Activity Summary
Telecommuni- cations Equipment	TCIF Just Starting - Promoting X12 and Bar Coding
Apparel	EDI Tied to "Crafted with Pride in the USA"

INPUT

ETOK-98





## EDI In Process Manufacturing

Segment	Activity Summary
Oil/Gas	COPAS Integrating EDI; Working on Unique Needs
Chemicals	CIDX Used by 30+ Companies

INPUT

ETOK -99



## EDI In Process Manufacturing

Segment	Activity Summary
Paper Products	EMLINK on GEISCO - Trade Association Product
Metals	Growing List of ANSI Product Code Descriptors

INPUT

ETOK-100



## EDI In Distribution

Segment	Activity Summary
Groceries	UCS Used by Most Large Firms
Office Products	Industry Association Project (ICOPS) Used by 40 Wholesalers, Large Dealers, and Manufacturers

INPUT

ETOK-101



## EDI In Distribution

Segment	Activity Summary
Warehousing	WINS Standard is Similar to UCS
General	Large Distributors and Mass Merchandisers (McKesson, K-Mart) Using Private Networks

INPUT

ETOK-102





## EDI In Transportation

Segment	Activity Summary
Rails	Large Companies Using Private Systems, Industry Association RCS, and Kleinschmidt
Trucking	60-200 Firms Using EDI
Ocean	U.S. Customs Promoting EDI to Cut Paperwork

INPUT

ETOK-103



## EDI In Medical Products And Services

Segment	Activity Summary
Pharmaceuticals	Wholesalers Active for 15 Years; Proprietary Standards Migrating to X12 for Entire Industry

INPUT

ETOK-104



## EDI In Medical Products And Services

Segment	Activity Summary
Medical Supplies	Captive Systems Best Known: AHS
Optometry	TOP Network Helping Independents Compete Against Retail Chains

INPUT

ETOK-105



## EDI In Services

Segment	Activity Summary
Health Claims	UB 82 and HCFA Formats; Growing Usage
Insurance	Industry Association Improving Interface/ Methods between Independent Agents and Carriers

INPUT

ETOK-106





## EDI In Services

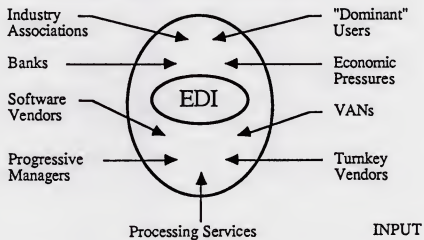
Segment	Activity Summary
Overnight Courier	EDI Used to Improve Customer Service to High-Volume Users
Banks	Growing Interest as Users, Uncertainty as Service Providers

INPUT

ETOK-107



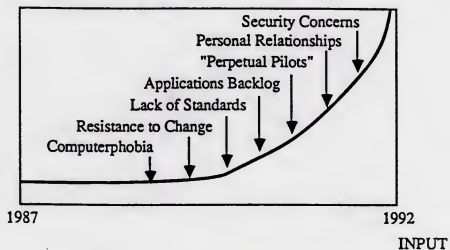
## FERTILIZING THE EDI EMBRYO



NOTES:



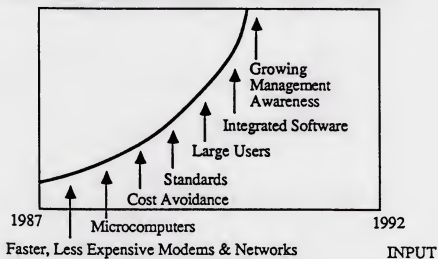
## NEGATIVE FACTORS IMPACTING EDI



NOTES:



## POSITIVE FACTORS IMPACTING EDI



NOTES:

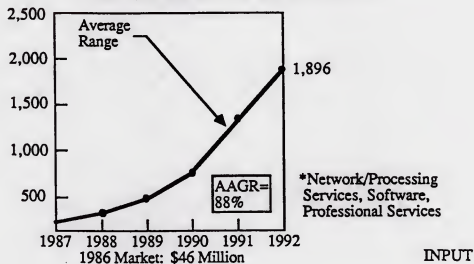
ETOK-110

INPUT





## EDI MARKET FORECAST\*

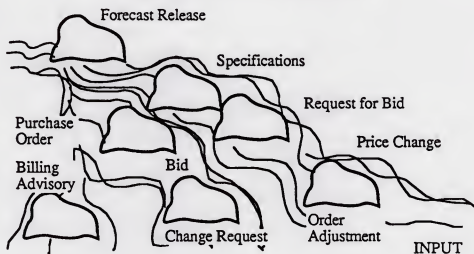


NOTES:

ETOK-111



## THE CASCADE EFFECT



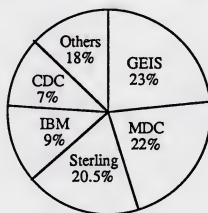
NOTES:

ETOK-112

INPUT



MARKET SHARE-SERVICES  
BY REVENUES 1986

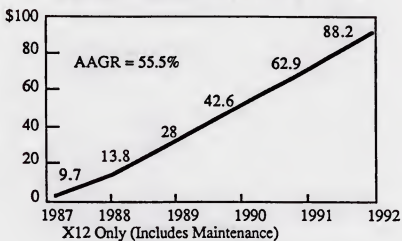


INPUT

NOTES:



EDI SOFTWARE -  
AN \$88 MILLION MARKET BY 1992



INPUT

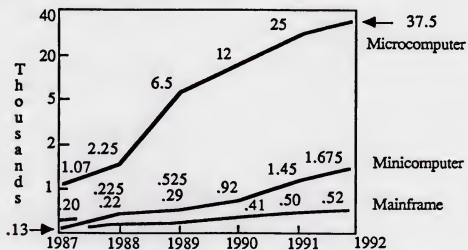
NOTES:

ETOK-114





# EDI SOFTWARE FORECAST - UNITS SOLD X12 ONLY



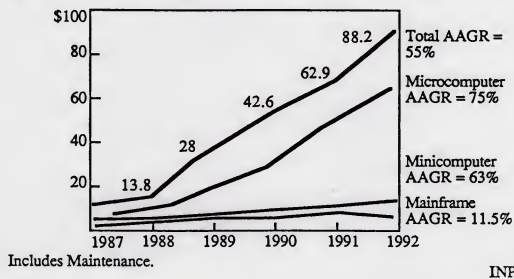
INPUT

NOTES:

ETOK-115



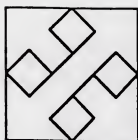
# EDI SOFTWARE FORECAST - USER EXPENDITURES X12 ONLY



NOTES:

ETOK-116





INTERNATIONAL  
EDI -  
A FIRST  
LOOK

Victor S. Wheatman  
Manager - EDI Planning Services

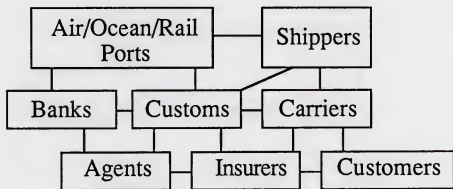
---

INPUT

---



## COMPLICATED TRADE INTERFACES



INPUT

NOTES:

ETOK-118





## INTERNATIONAL TRADE DOCUMENTATION

---

- ⊙ \$6-8 billion per year (U.S.)
- ⊙ \$40 billion (world wide)
- ⊙ 7 billion documents + copies
- ⊙ .5 billion U.S. Customs documents/year
- ⊙ Document fraud
  - \$100 million/year (ICC)

INPUT

**Notes:**



## **IMPORTANCE OF INTERNATIONAL TRADE**

---

- ⊙ **Off shore sourcing**
- ⊙ **Local content laws**
- ⊙ **Expanding markets**
- ⊙ **Global price, quality competition**

INPUT

**Notes:**



## THIRD-PARTY SERVICES' IEDI STRATEGIES

- Partnering, Agents
- Linking International Facilities
- Technology Licensing

INPUT

NOTES:

ETOK-121



# POSITIONING FOR INTERNATIONAL EDI

---

- GEIS
  - Trade\*Express
  - International Network Services Ltd. (with ICL)
- McDonnell Douglas
  - EDI II plan: licensing to PTTs, others
  - BT joint venture cancelled

INPUT

**Notes:**

# THEORY

THEORY OF THE EARTH AND ITS HISTORY

THEORY OF THE EARTH AND ITS HISTORY

THEORY OF THE EARTH AND ITS HISTORY



## POSITIONING FOR INTERNATIONAL EDI

(continued)

- **IBM**
  - **IN**
  - **Intercontinental Information Services**
  - **Greater European success than U.S.**
- **Western Union**
  - **3rd Q EDI service expected**
  - **Leverage international capabilities**
- **Others**
  - **AT&T, Telenet, CSC, British Telecom**

INPUT

**Notes:**



## EDI RELATED ACTIVITIES

- Trade facilitation bodies
  - NCITD, others
- Automated Commercial System
  - Advanced clearance of most shipments
  - Automated Broker Interface (ABI)
  - Automated Manifest System (AMS)
- Harmonized System (HS)
  - Implementation 1/1/88
  - U.S. has yet to ratify

INPUT

Notes:

# THE NEW YORK PUBLIC LIBRARY

ASTOR LENOX TILDEN FOUNDATION  
455 FIFTH AVENUE  
NEW YORK, N. Y. 10018

## EDI RELATED ACTIVITIES

(continued)

- **EDIFACT**
  - Electronic invoice in testing
  - Other documents to follow
- **CARDIS**
  - U.S. Department of Transportation and NCITD
- **Electronic bills of lading**
- **Electronic letters of credit**
  - Chase, First Chicago, Irving, others

INPUT

**Notes:**

# THE HISTORY OF

THE

REIGN OF

CHARLES THE FIRST

BY

JOHN

WILKINS

OF

THE

UNIVERSITY OF

OXFORD

IN

THE

YEAR

1649

## TELECOM CANADA

- Trade Route on Envoy 100
- Envoy 100 Links to TELENET, AT&T
- X.400 - Based
- No Network Translation

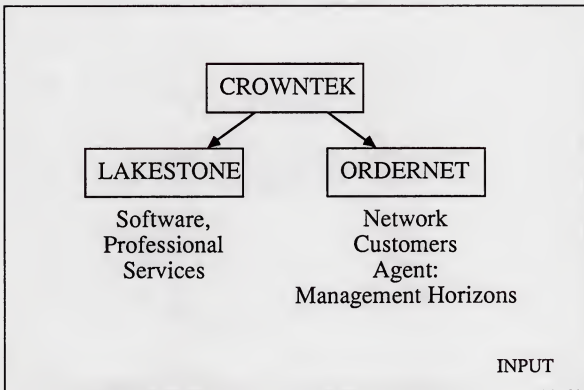
INPUT

NOTES:

INPUT







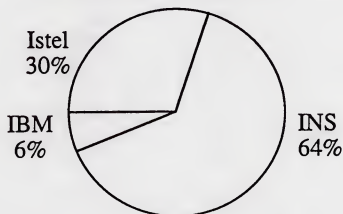
NOTES:

ETOK-127

INPUT



# 1987 U.K. EDI MARKET (Service/Revenues)



INPUT

NOTES:

ETOK-128



## Korea

- DACOM
  - International Pilot
  - Sears (Canada), Others
- X12 Formats
- Intent: Link with All N. American  
EDI Services

INPUT

NOTES:

ETOK-129



## Korea

- Steel VAN (POSCO)
- Auto (Establishing Industry Group)
- X.400 Pilot—Olympics
- Customs → EDIFACT

INPUT

NOTES:

ETOK-130





# Singapore

## TRADENET

- In Country Trade Community
- Proprietary Formats
- Government Projects

INPUT

NOTES:

ETOK-131



## Hong Kong

### HOTLINE

- Trade Council Initiative
- Also Banks, Air Carriers, Cable and Wireless, Ltd.
- Government Reluctant Participant in Study—Due Spring 1989

INPUT

NOTES:

ETOK-132



## Hong Kong

### HOTLINE

- Trade Council Initiative
- Also Banks, Air Carriers, Cable and Wireless, Ltd.
- Government Reluctant Participant in Study—Due Spring 1989

INPUT

NOTES:

ETOK-133



## JAPAN'S EDI ENVIRONMENT

- Telecommunications Liberalizing
- Increasing Intercompany Networking
- No EDI Standards
- Heavy International FAX Use

INPUT

NOTES:

ETOK-134





Many VANs

- Half with EDI-Type Services
- Leading EDI Service: NTT's Dress
- Some U.S. VANs Involved

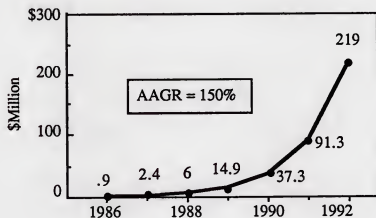
INPUT

NOTES:

ETOK-135



# U.S. USERS' EXPENDITURES FOR IEDI (Network Processing Services Only)



INPUT

NOTES:

ETOK-136



## IEDI: OPPORTUNITIES AND DIFFICULTIES

### Opportunities

- U.S., Others "EDI Ready"
- Third-Party Providers Available
- Standards Evolving

INPUT

NOTES:

ETOK-137



Difficulties

- Transborder Data Flow Issues
- Business/Cultural Issues
- Incompatible Systems

Third Parties Can Bridge the Gap

INPUT

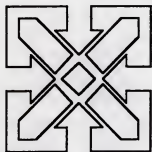
NOTES:

ETOK-138





## CENTRAL RECOMMENDATIONS CREATE AWARENESS



- Promote the EDI Solution
- Adopt an EDI Symbol

INPUT

NOTES:

ETOK-139

INPUT



## USER RECOMMENDATIONS

- Sell EDI Internally and to Trading Partners
- Build EDI onto On-Line Order Entry or Other Information Systems
- Use Development Assistance From Third Parties and Industry Associations to Minimize Risks

INPUT

NOTES:

ETOK-140

INPUT



## EDI RECOMMENDATIONS: THIRD-PARTY SERVICES

- Use EDI to Keep Customers
- Investigate Trade Association EDI Initiative in Unserved Segments
- Integrate EDI with E-mail Hardcopy Output
- Integrate EDI with Internal Forms Processing
- Create New Data Bases From EDI Transactions

INPUT

NOTES:

ETOK-141

INPUT



## SOFTWARE VENDOR RECOMMENDATIONS

- Offer a Full Line of Solutions
- Develop Alliances
- Enhance Products
  - Data Bases
  - EFT
  - Electronic Forms
  - Integrated Applications

INPUT

NOTES:

ETOK-142





## SOFTWARE VENDOR RECOMMENDATIONS

(Cont.)

- Investigating Non-IBM Solutions
  - e.g., Macintosh
- Develop Professional Services Capability

INPUT

NOTES:

ETOK-143



**Victor S. Wheatman**  
**Manager, EDI Planning Service**  
**INPUT**

Victor Wheatman specializes in research and analysis in the telecommunications, electronic data interchange, and office systems markets. Prior to joining INPUT, he held marketing and project management positions with an independent market research firm and was an independent telecommunications consultant to several U.S. corporations. His earlier career included management positions in the broadcasting industry.

Mr. Wheatman has a B.A. degree from Fairleigh Dickinson University, an M.S. degree in Communications from Boston University, and a Graduate Certificate in Telecommunications Management from Golden Gate University.

